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United States Patent [19]**Loos**[11] **Patent Number:** **6,091,994**[45] **Date of Patent:** ***Jul. 18, 2000****[54] PULSATIVE MANIPULATION OF NERVOUS SYSTEMS**[76] Inventor: **Hendricus G. Loos**, 3019 Cresta Way,
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[*] Notice: This patent is subject to a terminal disclaimer.

[21] Appl. No.: **09/144,762**[22] Filed: **Aug. 31, 1998****Related U.S. Application Data**

[63] Continuation-in-part of application No. 08/580,346, Dec. 28, 1995, Pat. No. 5,800,481.

[51] Int. Cl.⁷ **A61F 2/00**[52] U.S. Cl. **607/100**[58] Field of Search 607/96-98, 100-102,
607/115, 148, 152; 600/552-558**[56] References Cited****U.S. PATENT DOCUMENTS**

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Method and apparatus for manipulating the nervous system by imparting subliminal pulsative cooling to the subject's skin at a frequency that is suitable for the excitation of a sensory resonance. At present, two major sensory resonances are known, with frequencies near ½ Hz and 2.4 Hz. The ½ Hz sensory resonance causes relaxation, sleepiness, ptosis of the eyelids, a tonic smile, a "knot" in the stomach, or sexual excitement, depending on the precise frequency used. The 2.4 Hz resonance causes the slowing of certain cortical activities, and is characterized by a large increase of the time needed to silently count backward from 100 to 60, with the eyes closed. The invention can be used by the general public for inducing relaxation, sleep, or sexual excitement, and clinically for the control and perhaps a treatment of tremors, seizures, and autonomic system disorders such as panic attacks. Embodiments shown are a pulsed fan to impart subliminal cooling pulses to the subject's skin, and a silent device which induces periodically varying flow past the subject's skin, the flow being induced by pulsative rising warm air plumes that are caused by a thin resistive wire which is periodically heated by electric current pulses.

12 Claims, 5 Drawing Sheets